

CLAIMS

1. A bone grafting material comprising a porous carrier of ceramic or glass ceramic or glass material and at least one pyrrolidone arranged to the carrier.
2. The bone grafting material of according to claim 1, wherein the pyrrolidone is bound to the carrier by a chemical bond.
3. The bone grafting material of claim 1, wherein the pyrrolidone is selected from pyrrolidones, optionally substituted with alkyl or cycloalkyl groups, and polypyrrolidones.
4. The bone grafting material of claim 3, wherein the pyrrolidone is selected from 1-methyl-2-pyrrolidone (NMP), 1-ethyl-2-pyrrolidone (NEP), 2-pyrrolidone (PB), and 1-cyclohexyl-2-pyrrolidone (CP).
5. The bone grafting material of claim 4, wherein the pyrrolidone is 1-methyl-2-pyrrolidone (NMP).
6. The bone grafting material of claim 1, wherein the amount of pyrrolidone is between about 0.1 and about 50 weight-% of the total weight of the pyrrolidone loaded porous carrier.
7. The bone grafting material of claim 1, further comprising at least one bioactive agent.
8. The bone grafting material of claim 7, wherein the bioactive agent is selected from the group consisting of anti-inflammatory agents, antibacterial agents, antiparasitic agents, antifungal agents, antiviral agents, anti-neoplastic agents, analgesic agents, anaesthetics, vaccines, central nervous system agents, growth factors, hormones, antihistamines, osteoinductive agents, cardiovascular agents, anti-ulcer agents, bronchodilators, vasodilators, birth control agents, fertility enhancing agents and polypeptides.
9. The bone grafting material of claim 8, wherein the bioactive agent is at least one bone morphogenetic protein (BMP).
10. The bone grafting material of claim 1, wherein the carrier is selected from the group consisting of calcium phosphates, hydroxy apatites, silica gels, anorganic mineral bone matrixes, xerogels and sol-gel glasses.
11. The bone grafting material of claim 1, wherein the carrier comprises a ceramic/polymer composite.
12. The bone grafting material of claim 11, wherein the polymer is selected from the group consisting of polysulphones, polyaryletherketones,

polyolefins and biodegradable polymers.

13. The bone grafting material, comprising a porous carrier of calcium phosphate and 1-methyl-2-pyrrolidone (NMP) arranged in said calcium phosphate.

14. The bone grafting material comprising a porous carrier of calcium phosphate, 1-methyl-2-pyrrolidone (NMP) arranged in said calcium phosphate and at least one bone morphogenetic protein (BMP).

15. The method of producing a bone grafting material, the method comprising step of

preparing a porous carrier of ceramic or glass ceramic or glass, and adding at least one pyrrolidone to the porous carrier.

16. The method of claim 15, wherein the pyrrolidone is selected from pyrrolidones, optionally substituted with alkyl or cycloalkyl groups, and polypyrrolidones.

17. The method of claim 16, wherein the pyrrolidone is selected from 1-methyl-2-pyrrolidone (NMP), 1-ethyl-2-pyrrolidone (NEP), 2-pyrrolidone (PB), and 1-cyclohexyl-2-pyrrolidone (CP).

18. The method of claim 17, wherein the pyrrolidone is 1-methyl-2-pyrrolidone (NMP).

19. The method of claim 15, wherein the pyrrolidone is added in a liquid form to the carrier.

20. The method of claim 15, wherein the pyrrolidone is added in a vaporized form to the carrier.

21. The implant, comprising a carrier of porous ceramic or glass ceramic or glass material, and at least one pyrrolidone arranged in the carrier.

22. The implant of claim 21, wherein the pyrrolidone is selected from pyrrolidones, optionally substituted with alkyl or cycloalkyl groups, and polypyrrolidones.

23. The implant of claim 22, wherein the pyrrolidone is selected from 1-methyl-2-pyrrolidone (NMP), 1-ethyl-2-pyrrolidone (NEP), 2-pyrrolidone (PB), and 1-cyclohexyl-2-pyrrolidone (CP).

24. The implant of claim 21, wherein the amount of pyrrolidone is between about 0.1 and about 50 weight-% of the total weight of the pyrrolidone loaded porous carrier.

25. The implant of claim 21, further comprising at least one bioactive agent.

26. The implant of claim 25, wherein the bioactive agent is selected from the group consisting of anti-inflammatory agents, antibacterial agents, antiparasitic agents, antifungal agents, antiviral agents, anti-neoplastic agents, analgesic agents, anaesthetics, vaccines, central nervous system agents, growth factors, hormones, antihistamines, osteoinductive agents, cardiovascular agents, anti-ulcer agents, bronchodilators, vasodilators, birth control agents, fertility enhancing agents and polypeptides.

27. The implant of claim 26, wherein the bioactive agent is at least one bone morphogenetic protein (BMP).

28. The implant of claim 21, wherein the implant comprises a scaffold on whose surface the carrier is arranged.

29. The implant of claim 28, wherein the scaffold is made of ceramic or glass ceramic or glass material.

30. The implant of claim 28, wherein the scaffold is made of metal.

31. The implant according to claim 28, wherein the scaffold is made of polymer material.

32. The implant of claim 28, wherein the scaffold is porous.

33. The implant of claim 21, wherein the carrier is selected from the group consisting of calcium phosphates, hydroxy apatites, silica gels, anorganic mineral bone matrixes, xerogels and sol-gel glasses.

34. The implant of claim 21, wherein the carrier comprises a ceramic/polymer composite.

35. The implant of claim 34, wherein the polymer is selected from the group consisting of polysulphones, polyaryletherketones, polyolefins and biodegradable polymers.